

IN THE ABSTRACT

Please cancel the original Abstract at page 21, lines 1-23 in its entirety and insert therefor the following substitute Abstract on a separate sheet as follows:

## ABSTRACT

A multi-user detection method eliminating interference between users transmitting modulated data of symbols on a transmission channel, each transmission channel including at least one propagation path arriving at an array of reception antennas in a direction of arrival. Each user (a) estimates the signal transmitted by the user from the antenna signals, effecting estimation of the direction of arrival and characteristics of propagation of each path of the transmission channel from the signals; (b) estimates the data transmitted by the user from the estimation of the signal transmitted; (c) estimates the contribution of the user to the signals received by the different antennas from the estimated data and the estimated direction of arrival and propagation characteristics; and (d) subtracts from the antenna signals the contribution estimated at (c) to obtain cleaned antenna signals, supplied by at least a first sequence, used as antenna signals by at least a second sequence.